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ABSTRACT

This paper presents a career developmental model covering the ages of 5 to 18. Career development education includes experiences which facilitate self-awareness, career-awareness and career decision-making. Before choosing a model for career development, it is necessary to decide on a model for child development. The model developed here borrows heavily from the work of Harvey, Hunt, and Schroder for four basic stages, and proposes four other stages in terms which form the basis for subsequent extension. The career development experiences were combined with the eight stages of child development to form a matrix of 24 cells. Processes and media appropriate to each cell were derived, thus providing a matrix which serves as a base from which activities can be generated. (GEB)

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OCCUPATIONAL RESEARCH DEVELOPMENT

AN AGE-GRADED MODEL FOR CAREER DEVELOPMENT EDUCATION

By
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Preface

The wave of enthusiasm which has confronted Commissioner Sidney Marland's commitment to a national effort in "Career Education" is gaining momentum at all levels of education. The concept has caught the imagination of educators across the country who have been searching for a viable response to the hue and cry of taxpayers, parents and students alike, for a more relevant educational process. Despite the fact that career education has been sporadically implemented in innovative school districts these efforts will surely increase as educational leaders begin to recognize the far reaching implications of career development.

What is desperately needed, as we embark on this exciting course, is a statement which sets forth a rational approach for the development and implementation of career education. Professor Tuckman has provided in "An Age-Graded Model for Career Development Education" the rational approach which is so desperately needed. Tuckman astutely puts forth the theoretical underpinnings of child development and from this foundation constructs a model for career development on a K-12 continuum. What makes the work particularly significant is the practical applications of the theories of Self Awareness, Career Awareness and Career Decision Making.

As Tuckman suggests, the models which he puts forth are not intended to be definitive, but rather should serve to "facilitate career development" in the classroom. As an agent for facilitation, this work will stand the test of practicality. In the end, therefore, its impact will be directly related to the uses to which it is put by local educators.

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An Age-Graded Model for Career Development Education

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The purpose of this paper is to develop a career developmental model or framework for the Hackensack Public School System, covering the school ages of five to eighteen, from which hypotheses about the potential effectiveness of specific educational interventions on vocational choice and subsequent adjustment processes can be made. Schools are becoming increasingly aware of their potential as constructive agents in the career development process and are attempting to realize this potential through the introduction of in-class and out-of-class activities which seem relevant. However, it is difficult for educational professionals charged with this responsibility to know what kinds of activities are likely to provide the greatest payoff at different age levels. Not only is it difficult to anticipate what is likely to "work" for different age youngsters, but it is also difficult to decide what the criteria for establishing the effectiveness of any activity should be. How can we tell what should work, and how can we tell what has worked, are the significant questions to be asked. This paper will be addressed to suggested solutions for each.

In order to serve the intended purpose, this paper will be subdivided into three parts. The first part will deal with the purposes of career development education during the school-age years. This section will suggest what it is that we should be attempting to accomplish in school in terms of furthering career development.

It will, in essence, constitute an operational definition of career development.

The second section of this paper will describe a model of developmental stages of youth, ages five to eighteen, including the development of ego, cognition, and potential for "vocational sophistication." This model integrates the work of leading developmental theorists.

Finally, the paper will culminate in a section relating the developmental model (section one) to the operational definition of career development (section two) in order to provide the career development educator with hypotheses about the potential for general and specific interventions to produce success with different age children. This section will suggest career development goals and activities appropriate for each grade level of school as a guide for the practicing educator. These goals and activities will take the form of testable hypotheses contingent upon the model of child development and definition of career development which precede them.

A Definition of Career Development

Crites (1969) subdivides vocational psychology into vocational choice and vocational adjustment. Vocational choice is the term that has been largely synonomous with the label "career development." It was generally felt that school as a source of training would contribute to the making of a vocational choice. By the time a person had completed school, he would find it necessary to make a vocational choice and to begin to implement it. Once the implementation process had begun, it would become possible to examine that decision in the light of vocational adjustment. Thus, career development, loosely

speaking meant the process of making a vocational choice and was generally examined in terms of the accuracy of that choice (i.e.- its correspondence to individual interests and aptitudes) prior to its implementation, and to the level of adjustment attained, subsequent to its implementation.

Katzell (1964) advanced the notion that job satisfaction was a function of the discrepancy between the needs and talents of an individual and the characteristics and demands of his job. The greater the degree to which a person's needs are matched by job characteristics, the more satisfied he is likely to be. Thus, an individual who needs autonomy will be happy in a self-employment position to a greater degree than a person who needs supervision. Katzell argues that the worker who is meeting his needs and realizing his talents will be happier than one who is not. The findings of Tuckman (1969) tend to support Katzell's hypothesis.

Katzell's hypothesis can be used as the basis for formulating an operational definition of career development. We may say that career development is a process which enhances a person's ability to do the following three things:

(1) Develop and become aware of concepts about himself;

(2) Develop and become aware of concepts about his environment including occupations;

(3) Make career choices.

Career development education, then, would be defined as a sequence of planned experiences designed to help students develop concepts about themselves and their environment (including occupations),

and to facilitate the process of career decision-making. In short, career development education includes experiences to facilitate self-awareness, career-awareness, and career decision-making. As a component of public education, career development education is the link between abstract learning and the real world of needs and applications. Let us expand a bit on this definition by amplifying on the processes of self-awareness, career-awareness, and career decision-making. This will prove helpful in applying the developmental model offered in the next section.

Self-Awareness. Self-awareness is the continual process of finding out who you are. This is a continual process since life experiences theoretically provide the possibility for who you are to be constantly changing. There are a number of things to know about yourself in terms of career development. Some of those things are (1) interests, (2) attitudes (beliefs, opinions), (3) aspirations, (4) values, (5) motives, (6) needs, (7) orientations, (8) aptitudes, (9) competencies (skills, talents). We might subdivide these into (a) things that move you (e.g., motives, needs, aspirations), (b) things that direct you (e.g., interests, attitudes, values, orientations), (c) things that assist you (e.g., aptitudes, competencies).

In order for self-awareness to be continually occurring, the student must be confronted by a potentially feedback-rich environment. Within this environment, he must be willing to do the following four things:*

(1) take moderate risk

*These categories were initially suggested by McClelland (1965).

(2) assume responsibility for his own behavior

(3) search the environment

(4) use feedback

The development of the self and awareness of the self are largely contingent on the above four processes. Their use, as we shall see, varies according to age. Generally, however, taking moderate risk means trying new things that present some moderate chance of failure but will provide a sense of accomplishment if completed successfully. Assuming responsibility for one's own behavior means identifying personally with a task and recognizing its outcome as dependent upon one's talents and personal resources. Searching the environment means looking for feedback, and using feedback means incorporating this feedback into one's self-image.

Career Awareness. The second element of career development, career-awareness, refers to becoming aware of career opportunities and demands. Again, experiences must be made available that enable students to discover the kinds of careers that exist and the demands that they make upon individuals. Such awareness should include the following information about specific careers: (1) educational requirements, (2) skill requirements, (3) nature of the work, (4) work climates, (5) work rules, (6) work expectations. The availability of specific information and systematic searching within this information and the use of this information are critical in the development of career-awareness.

Career Decision-Making. Career decision-making represents the integration of self-awareness and career-awareness into the making of a tentative career decision. As a process it conforms to the

old label of vocational choice except that the elements are more clearly delineated. It includes, as Katzell has suggested, (1) the process of matching self and career in order to minimize their discrepancy and consequently maximize satisfaction. It also includes (2) an examination of cultural expectations and stereotypes in order to avoid certain pitfalls to the choice process. It also includes (3) a realization of the importance and ultimate necessity of making such a decision, (4) the process of constantly narrowing the field toward the selection of a cluster of careers or single career, and (5) a growing awareness of the relationship between means and end. It is this means-end cognizance that helps to direct self-awareness and career-awareness development as they occur concomitantly with the decision-making process. The relationship between these three processes is depicted schematically in Figure 1.

We are indebted to Dill (1962) for a model of decision-making that can be easily adapted to career decision-making. Moreover, it may be useful to think of career decision-making as one type of decision-making using the same process as that used to make other decisions, but varying only in perhaps content and importance. Dill (1964) has identified five steps in the decision-making process. They are

(1) AGENDA BUILDING PHASE: Covers the time administrators spend defining goals and tasks and assigning priorities for their completion.

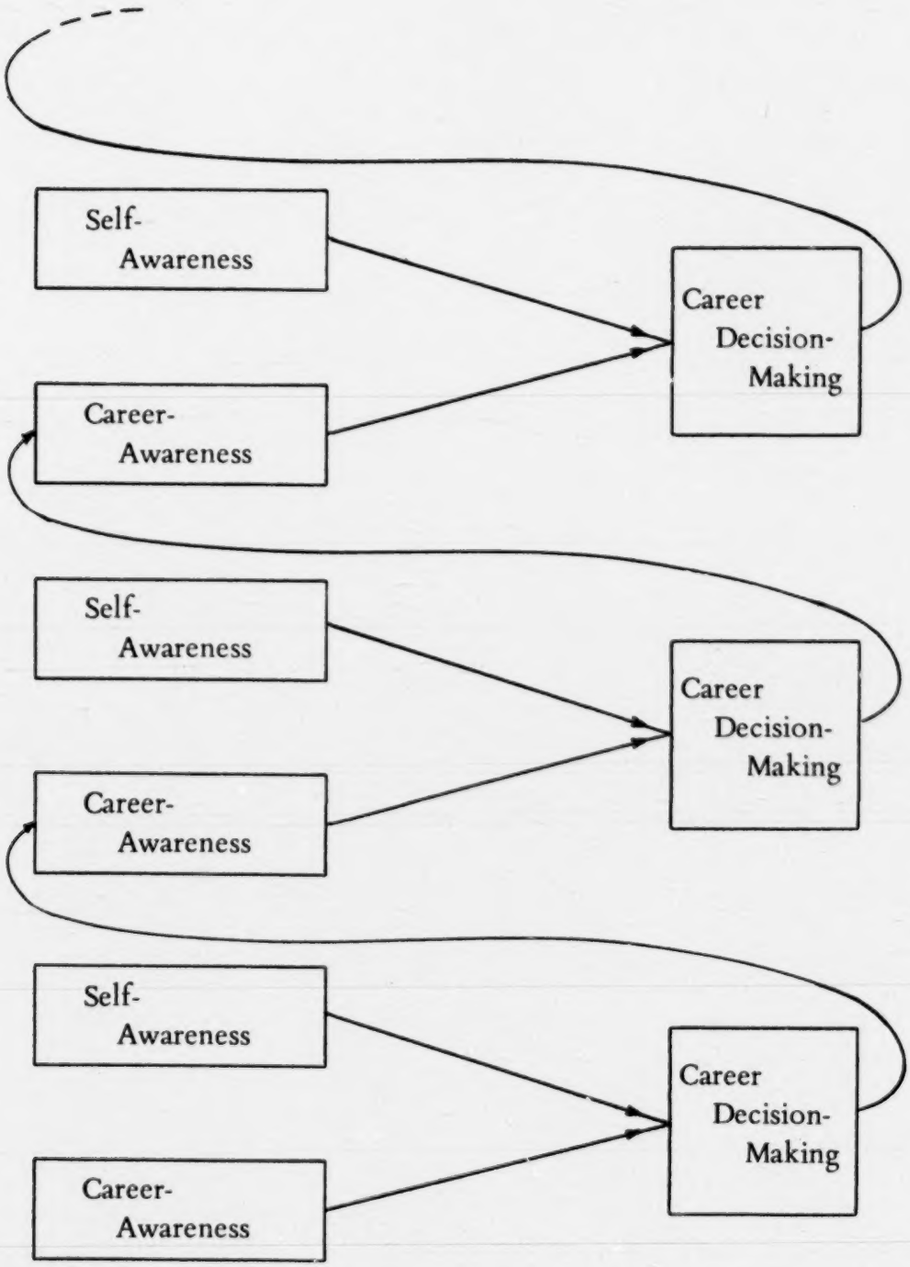


Fig. 1 — A Schematic Representation of the Relationship Between Self-Awareness, Career-Awareness, and Career Decision-Making.

(2) SEARCH PHASE: Encompasses efforts to find or invent alternative courses of action and to find information that can be used to evaluate them.

(3) COMMITMENT PHASE: Testing proposed alternatives to choose one for adoption, or to postpone making the choice.

(4) IMPLEMENTATION PHASE: Clarifying the meaning of the commitment for those who are to carry it out; elaborating the new commitment leads to, and motivating people to help put the commitment into effect.

(5) EVALUATION PHASE: Examining the results of previous commitments and actions in order to find new tasks for the agenda and to help the organization learn how to make decisions more effectively.

This model was developed to cover the decision-making behavior of school administrators. However, it seems adaptable to career decision-making. Initially, a person must orient himself to the need for making a choice and define the nature of the choice to be made. In step 2, self-awareness and career-awareness inputs are integrated so that a choice decision can be reached in the 3rd step. Step 4 involves implementation, which may be done on a role-playing basis or may include the implementation of narrowing decisions such as to go to college. Finally, the decision is evaluated. Obviously, student can recycle themselves through this process many times. What is important is that they go through it at all rather than "making" a career decision on a hit-or-miss basis.

A Model of Child Development

Before one can settle on a model of career development for school-age children, one must decide on a model of child development. Then, given such a model of child development, one can ask how each stage of development is likely to affect the processes of self- and career-awareness and career decision-making in order to arrive at some hypotheses about career development. This section of the paper, therefore, will provide a model of child development from which generalizations to career development can be made. (These generalizations will be the subject of the third and final section.)

The model presented borrows most heavily from the work of Harvey, Hunt, and Schroder (1961). The author has been working with this model since its publication, starting with his doctoral work under the supervision of H. M. Schroder. He has himself extended this model into the areas of group development (Tuckman, 1965) and educational applications (Tuckman, 1967). The basic model will be supplemented by the work of Erikson (1950), Piaget (1932; Piaget and Inhelder, 1969), and Ginzberg (et al., 1951).

The Harvey, Hunt, and Schroder (1961) model posits four basic stages of development which recycle more than once, and, given sufficiently unfavorable conditions, terminate in arrestation at one of the four stages. The stages differ from one another in terms of the ability of a child to differentiate within and between the varieties of sources of input information he receives and to recombine or integrate this information in new and unique ways.

Similtaneous with this process of increasing cognitive complexity is a similar process of increasing ego development. Consequently, in the first generic stage, the child does not differentiate between himself and his environment and others in it, while in the second stage he strongly differentiates self from other but fails to relate the two sets of concepts. In the third stage, he empirically matches self and other concepts, while in the fourth stage he generates superordinate concepts to relate self and other. As a result, the child is dependent on external control in the first stage, extremely anti-dependent or resistant to it in the second, open and sensitive to others in the third, and information and problem-solving oriented in the fourth. The major issue of the first two stages is dependency while the major issues of the last two stages is interdependency.

It is postulated that a confrontation with the new and unfamiliar results in a recycling of the stages. Thus, it is entirely likely that at least four recycles will occur, the first between infancy and the start of school, the second during the primary school grades, the third during the middle and high school grades and the fourth upon entry into college or the world of work. We will be concerned here with the second and third cycles. Whether a total recycle occurs depends on the environment in which the child functions. If this environment is open and supportive, total recycling will occur. If the environment is restrictive in a particular way, development will become arrested and only partial recycling will occur. The point at which such arrestation takes place will represent the

personality of the child.

For purposes of this paper, total recycling will be expected and all resulting eight stages will be described. Initially, however, the first four stages, called the primary stages, will be described. Following that, the middle-secondary stages will be described.

Primary Stages. The primary stages are outlined in Figure 2. The first stage is called Unilateral Dependence. In this stage, the child shows an absolute reliance on external control via rules and authorities. He cannot tolerate ambiguity and turns life into an endless series of rituals which must be adhered to. His need for security results in a focus on trust, trust in his parents and teachers primarily, to provide him with the security he needs. His thinking process is as yet pre-operational; he cannot carry out on operations on his symbols of the world in his head. His thinking is still primitive. His morality is based on rules and punishments. Rules are absolute and must be obeyed. One does not, as yet, question rules nor where they come from. Vocational choices, at this stage, are in the realm of fantasy. Kindergarten and part of first grade are characterized by this stage.

Given support and the opportunity to challenge authority, the child advances to the stage of Negative Independence during the first grade spending the remainder of that grade and much of the next in it. Now the child must assert his sense of self at home and in school and does so by exhibiting oppositional behavior. Rules and authorities are to be tested in order to extend the

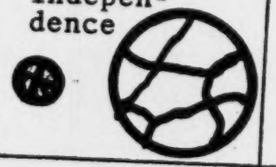
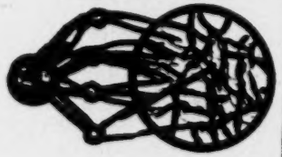
Stage	Grade Range	Age Range	Major Orientation Toward	Ginzberg	Erikson	Piaget	Necessary for Progression
1) unilateral dependence	K-1	5-6	External control; external criteria for evaluating behavior (need: being secure)	Fantasy	Trust vs. Mistrust (What are the rules?)	Preoperational thought — — — Moral realism	(1) permission to oppose authority (2) trust (3) opportunity for independence
2) negative independence 	1-2	6-7	Opposition to external control; focus on self and internal control (need: doing it my way)	Fantasy	Autonomy vs. shame, doubt (Am I my own master?)	Preoperational - Concrete operations — — — Heteronomy	(1) autonomy (2) freedom to set own standards (3) encouragement to socialize
3) conditional dependence	2-3	7-8	Concern with pleasing others, empathy, and developing social standards (need: being accpeted)	Fantasy	Initiative vs. guilt (What do my peers expect of me?)	Concrete Operations — — — Mutual Respect	(1) acceptability by peers (2) successful interaction and play experiences (3) opportunity to expand learning
4) interdependence 	4	9	Increased independence from adults and reliance on self and past experience; others used as source of information (need: exploring	Fantasy	Industry vs. inferiority (What am I capable of?)	Concrete Operations — — — Intentionality	(1) information-rich environment (2) freedom to search (3) new challenges

Fig. 2 - Chart of the four primary stages of child development. (The small circle represents self; the large others-environment; the subdivisions, differentiations; the lines, mappings; the empty circles, higher-order concepts.)

dominion of the self. The test for the child is to see if he can do it his way. Thus, the critical issue is autonomy which may be challenged by making the child feel shameful or guilty over his behavior. Such challenging will hamper development. The thought process is still somewhat preoperational, although it is during this stage that the transition to concrete operational thought occurs. The child begins to be able to manipulate symbols in thought but this process is restricted to the concrete. Principles such as conservation do not yet govern such manipulations. In moral development, punishment has become the great arbiter. "Good behavior is not punished, "bad" behavior is. If one can avoid punishment, one's behavior must have been good. The child uses this definition to challenge his "keepers" as to their treatment of him. It is a test of his power versus theirs. Vocational choice is still governed by fantasy.

If the child is given some freedom to set his own standards and determine his own behavior, and some encouragement by peers to establish social relationships, he will enter the third stage, Conditional Dependence, which generally lasts through the third grade. He now knows he is an individual person and uses his energy to establish relationships with other children. Interactive play begins to replace temper tantrums and obstinacy as the dominant behavior, as the child tries to learn about his age mates and the range of acceptable social behavior. Norms and standards unique and appropriate to play groups begin to emerge. The establishment

of such relationships requires initiative; its failure inspires guilt, particularly when a child is made to feel that he has trampled on a friendship. Punishment is no longer the moral determinant; children become sensitive to the need to respect and be respected and begin to avoid behavior that would threaten that respect. Such an orientation leads to cooperation. Cognitively, the stage of concrete operational thought is in full bloom, and vocationally, fantasy still dominates the choice process.

As the fourth grade begins, the child, banking on his prior social acceptability and the opportunity to learn more about the world, is ready for the fourth stage, Independence. No longer sensitive to the threat of interpersonal rejection, the child is ready to explore his world with an unrestrained vigor. He is ready to begin to theorize in concrete ways about how his world works. Curiosity needs begin to dominate social ones, and other children are looked upon as sources of information. Social initiative is replaced by industry, an effort to understand and affect the world at a simple level. The child is now a doer; being challenged perhaps only by a sense or inferiority which must be overcome. Morality, too, has become even subtler. The child now reacts to the intentions of the "wrongdoer" to decide whether a punishment should be forthcoming. He senses the spirit of the law rather than being confined to its letter. At the cognitive level, concrete operational thought is still the dominant mode while fantasy still governs the vocational choice process.

Middle-Secondary Stages. The middle-secondary stages are outlined in Figure 3. Recall that these four stages represent a

Stage	Grade Range	Age Range	Major Orientation Toward	Ginzberg	Erikson	Piaget	Necessary for Progression
5)external support	5-6	10-11	Approval by external sources; need for external anchors to guide behavior	Tentative (Interests)		Concrete Operations	(1) support by external agents (2) independence without threat
6)self-determination	7-8	12-13	Being able to exercise control over one's fate; need for a sense of self	Tentative (Capacities)	Identify vs. Role diffusion (Who am I?)	Concrete Operations Formal Operations	(1) Opportunity to decide on one's own behavior (2) Freedom to challenge authority and tradition (3) Encouragement to relate
7)mutuality	9-10	14-16	Being able to establish meaningful relationships with others; need for social norms and accpetance	Tentative (Values)	Intimacy vs. Isolation (Who are we?)	Formal Operations	(1) Establishment of relationships (2) Peer group identity (3) Desire and support to learn and grow
8)autonomy	11-12	17-18	Being able to learn and produce; need to understand and be creative	Tentative (Exploration)	Generativity vs. Stagnation (What can I become?)	Formal Operations	(1) Opportunity for productivity without social restraint (2) Stimulation (3) A new challenge

Fig.3 - Charts of the Four Middle-Secondary Stages of Child Development

recycling of the first four. Assuming that environmental conditions were such to enable progression through the first four stages, the second four will not be so intense nor so pure. However, it is unlikely that a child will "breeze" through the first four; it is more likely that he will experience some with more intensity and invest more effort in them than others. Thus, by the time recycling begins, the personality of the child is becoming more pronounced and will interact with each stage, adding individual idiosyncracies to the process. However, there is value for our purposes in examining this next cycle of stages in relatively pure form. For purposes of clarity, the second set of stages have been given new names.

The first of the middle-secondary stages has been named External Support. It occurs during the fifth and sixth grades as the child progresses through the ages of 10 and 11. During this stage, the child again seeks external support and approval while attempting to avoid ambiguity. His behavior is deviant typically only in an unstructured situation. He seeks external guidance, utilizes rituals, and attempts to win external praise and rewards as evidence of his own success and accomplishment. Cognitively, he is still in the stage of concrete operations while vocationally, his choices have passed out of the fantasy stage into the tentative stage wherein he begins to make meaningful choices based on his present interests which are beginning to emerge. Progression beyond this stage requires that external agents such as parents, teachers, scout leaders, etc. provide such of the external support he needs while providing him with opportunities for independence within a level of ambiguity

that he can tolerate.

Contingent upon the presence of the above conditions, the child will move on to the stage of Self-Determination during the seventh and eighth grades. Again, his sense of self will assert itself; he will challenge accepted standards and methods of operation and attempt to substitute his own as a way of testing his control over himself. He will resist being manipulated by authority and will try himself to become the mainpulator. He will fight back, often showing a lack of reason in doing so. His own battle cry will be akin to "Out-Island for the Out-Islanders". He will work toward an end for external domination, often overgeneralizing and misperceiving the intentions of external agents. He will seek by his own norm-setting behavior to establish his own unique identity; in doing so, he may threaten the superstructure that surrounds him. His new found self-ness will gain additional momentum by the emergence during this period of formal operational thought - the ability to mentally manipulate abstract symbols, and of a focusing on his own capacities as a basis for tentative vocational choices. In order to move beyond this stage, society and its socialization and maintenance agents must allow the youngster to control his own fate to some degree and to challenge the accepted order by behaving outside of it. Moreover, his peer group must encourage his joining with them in creating shared norms. The child is not so concerned in this sixth stage with what he can do as he is with being able to do it. It is a concern with "freedom from", in Fromm's (1941) terms, rather than "freedom to". He will

be constantly testing. Many youth today never pass beyond this stage because of society's unwillingness to tolerate their demand for freedom and their inability to form meaningful relationships with their peers.

Passage means movement into the stage of Mutuality, characteristic of the ninth and tenth grades.* Mutuality means an orientation toward the establishment of meaningful interpersonal relationships, and the creation of a peer group culture, characterized by a set of norms and standards unique to it. By separating from the adult culture, self-determination continues; however, the creation of a new "culture" allows for the development of shared norms and values. Of major importance to the adolescent is acceptance within this "cultural" group. To gain such acceptance, he will attempt to learn the standards of the group and abide by them. If he is successful, he will create the possibility for intimacy; should he fail, isolation will be his punishment. Consistent with this emphasis, vocational choice becomes focused on values - deeply cherished and consensually shared beliefs about what is important and how one should behave. The successful establishment of relationships and acceptability are important factors leading to progression, along with the opportunity to explore outside the limits of the peer group. Again, many adolescents never escape this stage.

* An alternative hypothesis is that the four stages totally recycle in both middle school and high school with external support being characteristic of 5th and 9th grades, self-determination of 6th and 10th grades, mutuality of 7th and 11th grades, and autonomy of 8th and 12th grades. This hypothesis as contrasted to that offered above should be examined empirically.

At the end of the long road through public schooling is Autonomy, being yourself in the positive sense of being able to do something with your interests, capacities, and values. At this stage, the adolescent uses his social relationships as a jumping off point into the world of learning and doing. He generates and creates ideas and things that have meaning to him and those around him. He is no longer constrained by his battles to challenge authority or be accepted by his peers. He can take on the world as a person who has found out who he is and now wants to do something about it. He is ready, at least temporarily, to "fly". He is also ready for serious ventures into vocational choice for purposes of exploration. He is ready to learn about the world of work by trying it. It too falls within his range of new ways to try his "wings". He is on the verge of having to make some important choices in his life. Unfortunately, he will soon leave the familiar confines of high school and face the recycling process again. However, if he has managed to complete every cycle up to this point, he is likely to find that each successive recycling will be shorter, less intense, and less likely to produce a setback.

Recommendations for Career Development Education

Everything discussed so far has been for the expressed purpose of developing this section of the paper - the transition from theory to practice. However, the preceding sections concentrating on definitional and theoretical matters, provide the framework by which meaningful recommendations can be made. In fact, the basis for this

final section is two matrices or grids, each formed by considering the three career development processes described in the first section: self-awareness, career-awareness, and career decision-making, and the eight developmental stages described in the second section simultaneously, thus producing 24 cells in each matrix. Then the following two questions are asked: (1) What career development process and themes would be most effectively carried out at each development stage? and (2) What medium or media would be most effective to carry out each recommended process at each development stage? By considering processes (themes) and media together, sample activities can be generated for each stage as can be general rules for deciding what to do when, and how to do it. We will consider in order (1) the themes to be carried out for each process in each stage, (2) the media to be employed for each theme (specific activities), and (3) some general rules to be employed for choosing themes, media, and activities.

Recommended Themes for Each Process. A chart of the themes recommended for each process at each stage of development appears in Figure 4. During the stage of Unilateral Dependence (grades K-1), little can be done in career development, primarily because of the age and cognitive level of the children. The only activities recommended are in the process area of career-awareness where two themes are identified: (1) nature of work: cultural information, and (2) nature of tools. Experiences should focus on helping children to appreciate the range of type of work which they can and have observed going on around them, i.e., in the home, in the school;

Stage	Grade Level	Self-Awareness	Career-Awareness	Career Decision-Making
1)unilateral dependence	k-1		(1)nature of work cultural info (2)nature of tools	
2)negative indepen-dence	1-2	(1)examination of interests	(1)nature of work: cross-cultural information (2)work climates	(1)realize that people choose
3)condi-tional depend-ence	2-3	(1)examination of motives, needs and orientations	(1)work climates (2)work expecta-tions	(1)realize that you must choose
4)inter-depend-ence	4	(1)examination of skills and competencies	(1)kinds of jobs (2)relation of jobs to society's needs	(1) decision-making process
5)external support	5-6	(1)examination of interests (2)examination of aspirations	(1)work rules (2)job requirements	(1)decision-making process
6)self-deter-mination	7-8	(1)examination of skills and competencies (2)examination of aptitudes	(1)value of work (2)job clusters	(1)decision-making process
7)mutuality	9-10	(1)development of motives (2)examination of values (3)exam. of atti-tudes & orientation	(1)work expecta-tions (2)work climates	(1)exam. of cultural expectations & stereotypes (2)narrowing (3)means-ends cognizance
8)autonomy	11-12	(1)develop. of skills & competencies (2)exam. of aspirations (3)develop. of motives	(1)skill require-ments (2)educational requirements	(1)matching self and environment (2)narrowing (3) choosing

Fig. 4 - Career Development Process Themes Recommended for Each Developmental Stage

by their fathers, relatives, etc. Other experiences should focus on tools, gadgets, and machines that they are likely to find in their homes - their nature and function.

By the stage of Negative Independence (grades 1-2), it is possible to plan activities in all three process areas - activities that include, where possible, autonomy as an element. In the self-awareness area, activities should focus on helping children to identify their own, individual interests. Career-awareness activities can expand on the nature of work theme to include exposure to work in cultures other than our own so that work, as such, begins to take on meaning. In this same vein, the theme of work climates, the settings in which different types of work occur, can be dealt with. In terms of career decision-making, activities must be limited since choice is at the level of fantasy. However, some exposure to the theme that type of work is something that people can often choose will help orient young children, concerned with autonomy, to the notion of choosing careers. However, any attempt to have children make choices at this stage will probably be meaningless.

In the stage of Conditional Dependence (grades 2-3), self-awareness activities should focus on motives, needs, and orientations. Motives such as those of achievement and affiliation, needs for security acceptance, and mastery, and orientations toward independence and mutuality can be examined as they occur in the children. These in turn can be related to the career-awareness themes of work climates (continuing from the preceding stage), and work expectations, i.e., why do people work, what can they gain from work, what can you gain from their work. The interrelationships

among the members of society can thus be gotten at. For example, each child can examine how he gains from the work carried out by the fathers of each of the other students and these relationships can be mapped. In career decision-making again activity is limited. However, building on the second stage theme that people often choose jobs, it would be possible to have children practice choosing, for the experience of choosing rather than the importance placed on the choice.

In the stage of Interdependence (grade 4), self-awareness activities can focus on skills and competencies. Children might be asked to write a story about what they are good at in order to help them become aware of their own skills and competencies (or to make something demonstrating these). In career-awareness, one might turn to an examination of jobs that exist in the various sectors of society and how they relate to the collective needs of society. An examination of industry via field trips may help them deal with these themes even though their ability to verbalize and conceptualize their observations may be limited. For career decision-making, the decision-making process itself may be examined by having children make simple decisions between equally desirable or equally undesirable alternatives and then examine the reasons behind their choice and how they decided. The emphasis would be on the process of making a decision rather than on the nature of the decision per se.

By the stage of External Support (grades 5-6), children begin to be able to make tentative vocational choices, and consequently career development efforts can be intensified. In terms of self-

awareness, the themes of interests and aspirations can become prominent. Clearly defined games wherein students have to estimate probability of success of certain outcomes and then bet on themselves to attain these outcomes might be a useful way to approach aspirations. Career awareness themes would include work rules, i.e., an examination of some general rules of conduct applicable to a wide range of occupations (such as safety or punctuality), and specific rules applicable in single occupations, and job requirements, i.e., what you have to like to do and be able to do to be different things. In career decision-making, the theme of the decision-making process started in the previous stage would be continued. However, it should be possible to make the activities more relevant to career choosing. Perhaps children could ask their fathers and mothers how they chose their careers and then discuss among themselves the choice process.

In the stage of Self-Determination (grades 7-8), self-awareness activities can focus on the themes of aptitudes, skills, and competencies, complementing the self-exploration undertaken during the preceding stage. Since youngsters at this stage are oriented toward themselves, it might be useful to have them turn their energies to an examination of their own uniqueness in terms of what they can do well. In career-awareness, work can be systematically examined along two lines, value for work and job clusters. In value for work, the emphasis would be on how work satisfies a person's unique needs and allows him to develop and use his own unique capabilities. In job clusters, an attempt would be made to see what different jobs have in common and how they might be

grouped. The study of job communalities might focus on shared aptitudes, skills and competencies, and thereby be tied in with value for work and the self-awareness themes. Career decision-making themes would include means-end cognizance and mock choosing. Activities would be utilized to help children realize that the selection of a particular end implies the acquisition of certain means. Without the means, the end is less likely reached. This can be tied in closely with an activity like careers simulation in which students choose career goals and then must specify interim, "means" behavior. This would be the first time in the curriculum that explicit career choice activities would be undertaken.

The stage of Mutuality (grades 9-10) is typified by emergent social relationships and resultant social sensitivity. Career development process activities would build on this proclivity. Self-awareness themes would include motives, values, attitudes, and orientations. McClelland (1965) has suggested some excellent methods for helping students to develop achievement motivation which could well be employed in the classroom. This kind of activity should stretch across all four high school years. For examining values, the work of Raths, Harmin, and Simon (1966) is highly useful. They suggest an activity such as the value grid where you test some of your views to see if they qualify as values. Another procedure they suggest is to have each student list the 20 things he most loves to do and then have him indicate which cost money, which are done alone, which has he done recently, which are the five he likes most, etc. Following this, each student is to formulate a statement indicating what he has learned about himself

from this activity. In career-awareness, work expectations and work climates would be the prominent themes. What do you expect to gain from work, and what can and must society and other people expect to gain from your work, are the critical questions to be asked about work expectations. Work climates is concerned with the nature of the work experience in terms of its potential for meeting individual needs, i.e., which jobs provide security, which challenge, which the potential for recognition, etc. In career decision-making, the emphasis would be on (1) an examination of cultural expectations and stereotypes, i.e., why are you expected to go to college, why does everyone want you to be a doctor or a lawyer, why aren't teachers considered professionals by many, etc., (2) the theme of narrowing down one's choices at least to job categories or clusters, and (3) the continuing examination of means and ends, particularly in terms of the narrowing process.

Finally, the stage of Autonomy signals the last opportunity for the public schools to facilitate career development, and activities should focus on the career decision which is imminent. Self-awareness activities focus primarily on skills and competencies mainly through the use of hands-on experiences. Aspirations are also seriously examined and the development of achievement motivation continues. The process of learning about oneself is focused on doing - on trying different things "on for size" and seeing "how they fit". Career-awareness focuses on the concrete educational and skill requirements of different jobs and also focuses on direct doing and searching. Information acquisition is the prime goal at this point as a prerequisite to the career decision making themes

of (1) matching self and environment, (2) narrowing, and (3) choosing. The individual has spent a lot of time learning about himself and the world of careers. He must now concentrate on relating one to the other in order to narrow down and ultimately choose a career or a general direction to go in as he leaves high school.

Recommended Media for Each Process. Figure 5 presents a chart of the media recommended for each process at each stage of development. These will be reviewed briefly here. In the first stage, two media are recommended: (1) films and picture-discussions, and (2) making things. Because of the concrete nature of these children, both in thought and emotion, it is considered best to proceed by showing them films or pictures of work in our culture and then have them talk about what they see. In addition, they can learn about tools by using them to make things while observing their use in our culture through films and pictures.

In the second stage, discussions can be the principal vehicle for career development along with more vicarious media such as films, pictures, and stories. Children can read stories related to the nature of work in different cultures and then discuss the commonality and differences of work in different lands. Since children have vivid imaginations at this age, why not utilize this in career development. The reading and making up of stories can be a useful way for children in this stage to begin to identify their own interests as well as a means of building the concept of work.

By the third stage, children are ready for more collective career development experiences. It is now possible to employ games,

Stage	Grade Level	Self-Awareness	Career-Awareness	Career Decision-Making
1)unilateral dependence	K-1		(1)films, picture-discussions (2)making things	
2)negative independence	1-2	(1)discussions (2)stories and drawings	(1)films, picture-discussions (2)stories	(1)discussions
3)conditional dependence	2-3	(1)games (2)pictures	(1)field trips (2)class project	(1)games
4)interdependence	4	(1)making things (2)demonstrating	(1)films (2)speakers (3)field trips	(1)games
5)external support	5-6	(1)games (2)test-making	(1)field trips (2)films	(1)games (2)question-asking
6)self-determination	7-8	(1)test-taking (2)making things	(1)research (2) hands-on	(1) simulations
7)mutuality	9-10	(1)role playing (2)exercises (3)microbehaving	(1)speakers (2)visitations (3)work experiences	(1)group projects
8)autonomy	11-12	(1)hands-on (2)discussions	(1)searching (2)work experiences	(1)individual projects (2)counseling (3)simulations

Note: Utilization of the recommended media should be built around the steps outlined for each process in the first section of this paper.

Fig. 5 - Media Recommended for Each Developmental Stage

class projects, and field trips to explore the themes recommended for this stage. Work climates and work expectations can be explored by exposing children to different work climates through field trips, and by having children engage in group projects to work on work expectations associated with different countries and cultures. It might be interesting to explore differential work expectations for the different sexes - a kind of "women's lib" unit to deal with these expectations as they emerge. Games might be particularly useful in helping children to examine their own motives, needs, and orientations. The children might discuss what different people's needs might be and then write these needs on slips of paper. Teams could be formed in terms of countries or segments of society. Each team would then select its "need cards" and explain their choices to the other team. The same game might be used for choosing careers. The names of careers could be written on cards, careers selected to fulfill the needs of some primitive culture such as the Eskimos. Each child would then select a card and the children could be clustered into career groups. A discussion could then ensue about what the culture can do about the jobs that nobody wants and why the culture needs all jobs to be filled. Such "simple-minded" games such as this are consistent with the level of the thought process of which these children are capable, while providing some important career concepts as well as the opportunity for interaction and cooperation.

In the <u>fourth stage</u> a wide range of media can be employed, in all cases with an emphasis on doing and trying. Self-awareness

activities should concentrate on children doing things, observing others doing things, and showing others how to do things. Searching should be the media theme for career-awareness with information about careers made available through films, speakers, and field trips. The experimental curriculum - Man: A Course of Study (Bruner, 1966) includes films of the Kalahari Bushman and Netsilik Eskimo which deal in part with the occupational needs of each culture and occupational roles of their members; this may be useful at this point for the process of career-awareness. After viewing some film on making animal traps, the children could attempt to make traps and discuss why the culture finds it necessary to trap animals. Thus, the activity can span both careers and ecology. Games can again be employed to illustrate the decision-making process. Each child can be told to write the names of five things he loves on cards and then to choose the one he would like to do now. Children can compare their cards and the process by which they made their choice. Haphazard or impulsive choices can be compared to more systematic ones. Impulse, however, should not necessarily be discouraged, although it might be related to planning which could be introduced at this point. Children could be asked to make a plan for doing all five of their choices. Plans could then be compared.

The fifth stage introduces two new media, test-making and question-asking. Test-making refers to the construction of techniques to determine certain characteristics that a child has, such as what he is interested in. A unit on how to determine a person's interests might be employed. Children could be asked to come up with some

ways to figure out what someone is interested in. They would then be encouraged to try their techniques on themselves and on one another. Question-asking is a way of gaining insight into the decision-making process, particularly by asking others how they decided to be what they are. Field trips and films would be continued on from the preceding stage.

The sixth stage brings many new media into the career development arena, partly due to the fact that thinking processes will be making the transition from concrete to formal operations. The potential for abstract thought raises many possibities. In self-awareness, children are ready to find out about their own capacities by taking tests and making things. Many tests exist for measuring aptitudes. Many of these tests are interesting. Tests of musical ability, of artistic ability, of clerical ability, of creativity, etc. are fun to take. Within the limits of what these tests measure, kids should be allowed to "play" with them. Units on measuring aptitudes and skills would be recommended at this point. Children can also learn about what they are good at by making things. A wide range of construction activities in the classroom and shop might be undertaken, with the emphasis on the student being allowed to make what he wants and what he thinks he is good at.

Career awareness can be heightened in the sixth stage by research and the hands-on process. By making things, children are provided with a hands-on experience that helps them learn both about themselves and the world of work. Programs like the American Industries Program developed at Stout State University provide for

career-awareness through both research and hands-on experiences. Let students take an industry that intrigues them, do some research about how it operates, and then build some sort of a model of it. Let students do research on the means of production employed in eighteenth and nineteenth century America and build some models of this production equipment. This would seem a useful way to learn about careers.

In career decision-making, the sixth stage represents the beginning of choice. Simulation is the recommended medium. Build a simulation that includes options for both means and ends. Have students make "investments" in means in order to arrive at desired ends. This will not only facilitate the choice process but will help establish means-end cognizance.

The seventh stage also offers broad latitude in media, brought on by the reappearance of mutuality coupled with the sophisticated thought processes of which adolescents are capable. Emphasis throughout this stage is on social factors. Three new media make their appearance in self-awareness, focusing on motives, values, attitudes, and orientations. Role-playing oriented around employer-employee, labor-management negotiations, and other work-relevant interpersonal situations helps students identify where they stand. Exercises such as those employed by McClelland to teach achievement motivation and Raths et al. to deal with values should work well at this stage. Darts-dice, a game where students bid on their own performance, incorporates all the elements of self-awareness. Value exercises include giving students three value-laden positions and

having them rank them in order of preference. Finally, micro-behaving is a procedure for learning about oneself by seeing oneself. In conducting one of the above exercises, have the entire proceedings videotaped. Then play back the tape for the class and have them critique their own behavior. Videotape a regular class session and then have the class critique the playback in terms of their own dependency or acting out behavior. Have them critique the teacher as well.

In career-awareness training, the work experience makes its advent at this stage. Such work experiences should be short-term (they may be simulated), and should serve the purpose of exploration rather than training. Visitations to work situations and speakers should also provide the opportunity for exploration.

In approaching career decision-making, group projects are recommended. Have students, for instance, design projects to get at cultural work sterotypes and to facilitate their choice process. Have them construct choice balance sheets where they list their own qualities and needs as credits and the demands of the job as debits and use this as a means of narrowing choices.

Activities in the eighth stage should be primarily experiential and individual. Work experiences and concomitant discussions should focus on the individual's perception of himself and the talents and characteristics he brings to the job. Work experiences should also provide an avenue for career-awareness. Beyond this, the student should engage in a guided search process to learn as much as he can about jobs. Career libraries and computerized information retrieval

systems will be most helpful here. Units should focus on the skill and educational demands of different careers and the process by which such information may be obtained.

Career decision-making should rely most on individual counseling and projects, although group counseling and career simulations may also be helpful. Have students focus on the match between self characteristics and job requirements, continuing with the development of the career choice balance sheet begun in the preceding stage. Teachers should receive some training in group counseling and conduct such sessions with their students. Videotaping of these sessions might prove useful. A useful unit might be to have students design a career choice simulation and then to play it themselves or run it for younger students. From videotape playbacks of simulation sessions, generalizations about the career choice process may be made.

A summary of some suggested unit titles appears in Figure 6.

Some Guidelines for Designing Activities

The activities describe thus far for career development education constitue samples or illustrations of the kinds of activities that might be employed. It remains for the career development educator to devise many of his own activities and then test out their efficacy. In designing activities, he will undoubtedly call upon colleagues, teachers, and students to assist him. To guide this process in terms of the model of child development offered in this paper, some general guidelines are furnished below.

(1) For students in the concrete stages (stages 1 and 5),

Stage	Grade Level	Unit
1	K-1	Guided Tour (1) Films and pictures of work in our culture. (2) Tools and gadgets around us: What they are used for.
2	1-2	(1) Making up stories about one's own interests. (2) Films and pictures of work in other cultures.
3	2-3	(1) Class project: how do we gain from the work of our parents. (2) Class project: are there different jobs for different sexes? (3) Game: needs of different countries and their careers.
4	4	(1) Making up stories (or making something to show what you're good at. (2) Field trips: jobs in the sectors of American society. (3) Films: Man-A Course of Study: jobs in other cultures. (4) Game: how I choose what I would like to do.
5	5-6	(1) Game: estimating successes and betting on outcomes (e.g., ring toss). (2) Making up tests to determine interests. (3) Asking your parents how they chose to be what they are.
6	7-8	(1) How can we find out what our skills and aptitudes are? (2) American Industries Program: research and construction of the processes of production. (3) Simulation: choosing the means to achieve desired ends.
7	9-10	(1) Developing achievement motivation: the darts-dice exercise. (2) Clarifying values: the values grid and activity lists. (3) Role playing: interpersonal "bargaining". (4) Videotaping and critiquing a class. (5) Work visitations: the exploration of work climate. (6) Group projects: cultural work sterotypes.
8	11-12	(1) Work "experience": trying jobs on for size. (2) Guided search: career libraries and information systems. (3) Group counseling: the teacher as counselor. (4) Simulation: careers game designed by students. (5) The talents-demands balance sheet for matching self and career.

Fig. 6 - Some Sample Career Development Units for Each Stage

activities should be reasonably well-structured and guided by the teacher. Gerneralizations to be made should be clear and simple. Unit content should focus on traditions, rules, and other structures for regulating behavior.

(2) For students in the resistance stages (stages 2 and 6), activities should be reasonably individualistic and allow the student to operate outside of traditional rules and authority where possible. Unit content should focus on autonomy and individual maximization and choice.

(3) For students in the social stages (stages 3 and 7, activities should involve group or collective action and should allow for the possibility that groups may generate their own norms. Unit content should focus on social and cultural factors climate, and group-generated norms and sterotypes.

(4) For students in the productivity stages (stages 4 and 8), activities should allow for individual production and guided searching as a vehicle for arriving at insights and generalizations. Unit content should focus on productivity and the interrelationship between individual and society.

(5) Abstract generalizations can only be expected in stages 7 and 8 and the latter part of stage 6. No generalizations are likely in the first stage or much of the second. Stages 3-5 and much of 6 will be limited to concrete and superficial generalizations.

(6) Vocational choice activites are likely to lack meaning during the first four stages. Meaning will begin to accrue

to such activity as the person progresses through stages 5 to 8.

Of course the above "rules" are generalizations and must be tested and refined. They should, however, provide the career development activities. They have been largely followed in the specification of themes and media in earlier portions of this paper.

Conclusion

This paper has covered a lot of ground. It began with a delineation of career development processes into those focusing on self-awareness, those on career-awareness, and those on career decision-making. These three categories later served as subdivisions for the specification of themes and media to be used in career development education. Within the initial discussion of each process, some procedural guidelines were offered. Self-awareness, for example, was thought to involve taking moderate risk, assuming responsibility for one's behavior, searching the environment, and using feedback. While guidelines such as these were not reiterated later in the paper, they should be incorporated into career development activities throughout the school years.

The middle section of this paper dealth with a model of child development - to be used as a jumping off point for the specification of themes and media for career development education. Eight stages were described in detail, in terms which would form the basis for subsequent extension.

The paper culminated in the consideration of career development

education. By simultaneously considering career development processes and stages of child development, themes, media, and sample units for career development education during the public school years were generated. Finally, a set of guidelines based on the development model were offered to guide the further generating of units and activities.

What has been offered here is intended to be heuristic rather than definitive. It remains for the career development educator to transform the many hypotheses about what will "work" and when offered in this paper into operational units and activities for use in the classroom and the school to facilitate career development. As such hypothesis testing occurs, it will be possible to refine the models and hypotheses offered here to bring them more into line with reality. Such refinement is mainly important insofar as it gives educators increasingly precise models for choosing and designing experiences that will help children and adolescents to grow. As the model becomes precise, educators of the future will need to waste less time in the process of deciding how to facilitate career development in children of different ages. In the meantime, educators of the present can use these formulations in helping them to decide how to proceed. Models are therefore useful to developers and practitioners. They often provide the wisdom of insight and experience over a broad range of considerations as a basis for attacking needs in the here-and now (classrooms)within the art to the possible (schools). Without a checkroom to check one's coat, and a numbering system to identify it, one never knows whether the

coat one reclaims will fit.

And a final word on career development within the province of public education. Liberal education always claimed that its link to the future was its abstractness and generality. Students learned disciplines rather than facts. Career development introduces a set of process that are specifically aimed at helping a student to encounter the future, regardless of what form it may take. As such, it provides the schools with a strong link to reality. Not to belabor a point or overwork a word - it is relevant.

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